Monthly Report for October

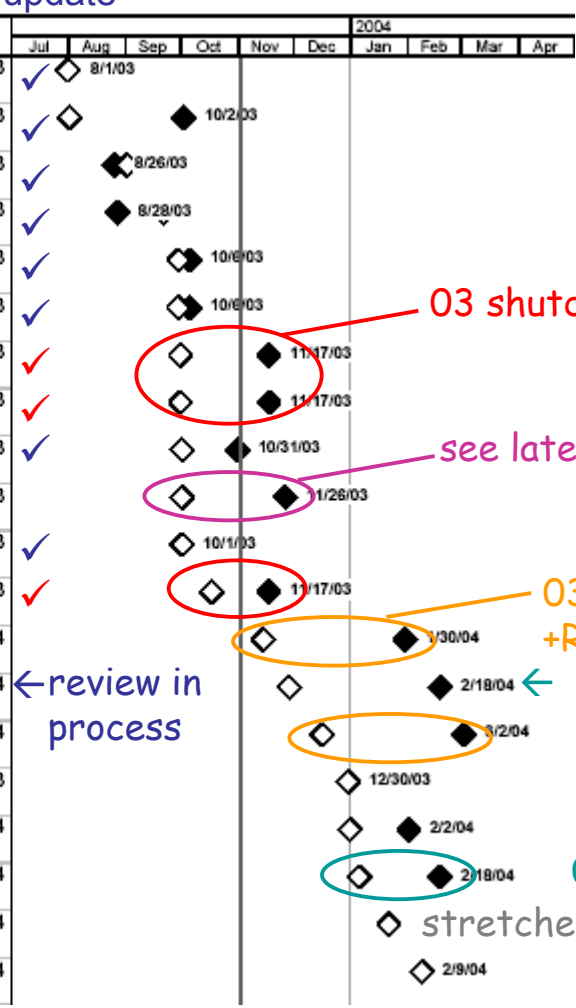
- Milestones and Reviews
- % complete summary (reported against v1.0)
  - e-Cool Shutdown in 2005
  - Tev BPM Project
- Prep for v2.0

Milestones

milestones <Feb review ordered by v1.0 baseline date (V1.0 estimates ~May)

v1.0 Oct update

ID	WBS	Name	Baseline St	Start
670	1.3.4.8.1	Review Tevatron Alignment Plans	8/1/03	8/1/03
123	1.3.1.3.3.2	Review MI 2.5 MHz Acceleration (Milestone)	8/1/03	10/2/03
631	1.3.4.4.5.3	Decision on separators/magnets	9/1/03	8/26/03
62	1.3.1.1.6	Design Review (Milestone)	9/22/03	8/28/03
589	1.3.4.3.2.3	Decision to proceed with wire station prototype	9/29/03	10/6/03
712	1.3.6.2.1	Review: Tevatron Upgrade Plan (Milestone)	9/29/03	10/6/03
386	1.3.3.4.8.1	FY03 plan includes vacuum work in FY03	10/1/03	11/17/03
391	1.3.3.4.9.1.1	FY03 handover is installation in FY03	10/1/03	11/17/03
370	1.3.3.4.2	Commissioning Parameters Defined	10/1/03	10/31/03
645	1.3.4.6.4.2	Tev BPM: Review (Milestone)	10/1/03	11/26/03
652	1.3.4.6.5.3	Tev IPM Design Review, decision to proceed	10/1/03	10/1/03
664	1.3.4.7.1	FY03 plan includes FY03 shutdown (Milestone)	10/17/03	11/17/03
372	1.3.3.4.4	Commissioning Plan Evaluation (Milestone)	11/14/03	1/30/04
350	1.3.3.3.2.1.2	Review System Design: stacktail betatron	11/28/03	2/18/04
713	1.3.6.2.2	Review: RR and Electron Cooling Commissioning	12/16/03	3/2/04
86	1.3.1.2.1.4.3	New Target in Operation (Milestone)	12/30/03	12/30/03
407	1.3.3.5.2.1	Pelletron extension parts received (Milestone)	1/1/04	2/2/04
324	1.3.3.3.1.1.5	Review System Design: stacktail momentum	1/5/04	2/18/04
110	1.3.1.2.2.4.2	Beam Sweeping Operational (Milestone)	1/21/04	8/23/04
66	1.3.1.1.10	Start Slip Stacking Assembly (Milestone)	2/9/04	2/9/04



% Complete

Cummulative Perf/Sched: Aug Sep Oct
86 85 77%

WBS	Name	TEC	August		September		October		Cum Perf/Sched		
			Schd / TEC	Perf / TEC	Schd / TEC	Perf / TEC	Schd / TEC	Perf / TEC	Aug	Sep	Oct
1	**Run II - Jeff Spalding**	**$42,318,244**	**11%**	**10%**	**14%**	**12%**	**19%**	**15%**	**86%**	**85%**	**77%**
1.2	**Maintenance and Reliability - Paul Czarapata**	**$5,686,356**	**3%**	**3%**	**8%**	**8%**	**12%**	**12%**	**92%**	**100%**	**100%**
1.3	**Luminosity Upgrades**	**$36,631,888**	**13%**	**11%**	**15%**	**13%**	**20%**	**15%**	**86%**	**84%**	**75%**
1.3.1	**Protons on Pbar Target - Ioanis Kourbanis**	**$4,160,962**	**12%**	**9%**	**14%**	**9%**	**30%**	**24%**	**74%**	**65%**	**80%**
1.3.1.1	Slip Stacking	$1,542,046	23%	18%	23%	19%	61%	56%	80%	82%	92%
1.3.1.2	Pbar Target and Sweeping	$242,779	44%	38%	53%	39%	63%	43%	85%	72%	68%
1.3.1.3	MI Upgrades	$2,304,246	1%	0%	3%	0%	5%	0%	0%	0%	0%
1.3.1.4	Booster-MI Cogging	$71,891	36%	16%	54%	0%	67%	54%	45%	0%	80%
1.3.2	**Pbar Acceptance - Steve Werkema**	**$5,391,732**	**11%**	**9%**	**13%**	**11%**	**15%**	**11%**	**78%**	**80%**	**73%**
1.3.2.1	Lithium Lens Upgrades	$1,377,763	24%	18%	26%	20%	27%	20%	76%	76%	75%
1.3.2.2	AP2 and Debuncher Acceptance	$4,013,969	7%	6%	9%	7%	11%	8%	81%	84%	71%
1.3.3	**Pbar Stacking and Cooling - Paul Derwent**	**$7,891,787**	**8%**	**6%**	**10%**	**8%**	**15%**	**9%**	**69%**	**73%**	**59%**
1.3.3.1	Stacking and Cooling Integration	$609,580	19%	19%	22%	22%	25%	25%	102%	102%	101%
1.3.3.2	Debuncher Cooling	$28,248	100%	63%	100%	63%	100%	63%	63%	63%	63%
1.3.3.3	Stacktail Cooling	$2,382,129	1%	0%	1%	0%	2%	1%	33%	34%	39%
1.3.3.4	Recycler Stacking and Cooling	$1,073,283	3%	3%	4%	4%	9%	4%	94%	96%	48%
1.3.3.5	Electron Cooling	$2,100,761	19%	12%	24%	17%	38%	22%	65%	72%	58%
1.3.3.6	Rapid Transfers	$1,697,786	3%	1%	4%	1%	5%	1%	41%	32%	26%
1.3.4	**Tevatron High Luminosity - Vladimir Shiltsev**	**$16,371,987**	**14%**	**13%**	**17%**	**15%**	**21%**	**16%**	**91%**	**88%**	**75%**
1.3.4.1	Tevatron Task Force	$2,599,926	16%	16%	18%	18%	20%	20%	102%	102%	101%
1.3.4.2	Beam-beam Limitations	$639,969	16%	16%	18%	18%	20%	20%	101%	101%	101%
1.3.4.3	Active Beam-Beam Compensation	$3,593,262	17%	8%	19%	8%	21%	8%	48%	43%	38%
1.3.4.4	Increased Helix Separation	$3,748,975	7%	7%	7%	7%	8%	7%	104%	99%	91%
1.3.4.5	Luminosity Leveling	$18,335	0%	0%	0%	0%	0%	0%			
1.3.4.6	Improved Control and Diagnostics	$4,106,489	17%	18%	21%	21%	32%	24%	102%	101%	76%
1.3.4.7	Tevatron Vacuum Improvements	$125,725	0%	0%	0%	0%	0%	0%			
1.3.4.8	Tevatron Alignment	$1,539,307	13%	18%	26%	28%	32%	28%	138%	108%	86%
1.3.6	**Project Management - Jeff Spalding**	**$2,815,419**	**19%**	**19%**	**21%**	**21%**	**23%**	**23%**	**102%**	**101%**	**101%**

Recycler
e-Cool
-- shutdown

Tev BPM
-- proj. plan

Comparing to v1.0(~May) – need baseline update

e-Cooling

- Operating full beamline at WideBand – going well – on schedule for March 19 milestone (beam properties demonstrated)

- However, 3-4 weeks of prep work in MI tunnel not done this shutdown → adds the shutdown need in 2004
- Also, re-evaluated work for v2.0 → adds 3 weeks

e-Cooling 04 shutdown (first pass)

Shutdown Worklist

Timeline drivers (other tasks in parallel)	
• Modify LCW Headers	1
• Modify Bus	2 ← fixed price
• Remove steel shielding plugs, install vacuum spool, bead fill	1
• Pull cables	3 ← T&M
• Install stands	1 ← prep
• Install solenoids	1
• Install magnets (all)	1
• Vacuum system + solenoid alignment	1
• Magnetic measurements	2
• Final alignment + pump down	1
• Leak Check	1
• Bake vacuum system	1
Total	16 wks

had been planned for 04 shutdown

Can it be squeezed?
2-shift operation → 2 wks

align+place stands ahead of time (needs 6-8 days access in blocks>2 days, Jan-July) →1 wk

13 wks

7 wks + 6 wks

Is there a natural break point?
break into Recycler vacuum: 10 wks + 6 wks

First pass: e-Cooling will need ~13 wks of shutdown after July 1

Estimates for 5 days/ week, 8-10 hour days - will be reviewed by Augustine

Tev BPM Project

- Requirements document updated and reviewed
- Developing hardware and software specs
- 3-way technology choice:
  a) e-Cooling style board (B Chase): in-house redesign
  b) MI damper style board: in-house redesign
  c) New faster Echotek board: commercial
- Taken test data with (a) and setting up data-taking with (b)
- In contact with vendor for (c): availability?

- Review technology choice Dec 10 [?]
  - Technical performance / specs
  - Cost (all costs) and schedule (design cycles)
  - Long-term maintenance
  - Applicability to beamline and MI BPM upgrades?

- Project supported heavily by Comp Div. (joint team CD&BD)
  - Steve Wolbers (Proj Mgr), Bob Webber (Deputy)
- Candidate for FY04 AIP project

Prep for v2.0

- All subprojects are updating the RLS logic and estimates
  - Due Nov 30 (except for Recycler: Dec 15?)
  - Tevatron and Recycler will be late (major scope updates)
- Aim to be sufficiently complete to discuss schedule for shutdowns at next PMG
- Starting to plan the accompanying document – content/outline at next PMG
- Updated long range shutdown schedule

• Internal completion v2.0	Dec 31
• Internal Review	~Jan 20
• Send to DOE	Jan 30
• DOE Review	Feb 24-26

Other Issues

We are:

- Developing project plan for RLS v2.0
- Tracking progress via RLS v1.0
- Holding Technical Reviews → scope and punctuation points

We are not yet:

- Cost reporting

- Plan to collect actual costs from October 1
- Need additional help ← in discussion with Harlan…